U.S. Fish and Wildlife Service
Sacramento Fish and Wildlife Office
2800 Cottage Way, Rm. W-2605
Sacramento, California 95825

February 15, 2002

To: Andy Hamilton, FWS,SFWO
Gary Taylor, FWS, SFWO
Matt Brown, FWS,NCVFWO

From: Mark Gard, Sacramento Fish and Wildlife Office

Subject: Monitoring Of Restoration Projects In Clear Creek Annual Report

Attached for your information is a copy of the third annual report for the U.S. Fish and Wildlife Service's Clear Creek Restoration Project Investigations. During the past year, we continued modeling work on chinook salmon juvenile rearing and spawning habitat modeling sites on Clear Creek below Saeltzer Dam within the restoration area. Restoration activities are scheduled to take place in summer 2002 after which time data will again be collected at each of the modeling sites. These data will be used to evaluate whether the restoration activities are successful at increasing the quality and quantity of chinook salmon rearing and spawning habitat in Clear Creek.

If you have any comments or questions about the attached report or our investigations, please feel free to contact me at (916) 414-6588.

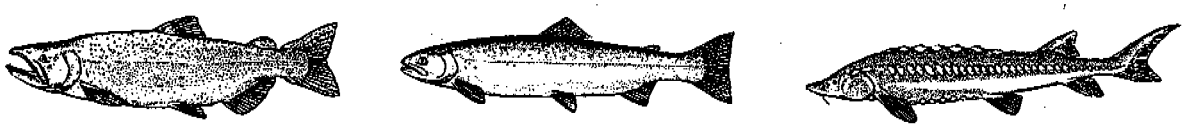
Attachment

MONITORING OF RESTORATION PROJECTS IN CLEAR CREEK, CALIFORNIA

Annual Progress Report
Fiscal Year 2001

U.S. Fish and Wildlife Service
Sacramento Fish and Wildlife Office
Room W-2605
2800 Cottage Way
Sacramento, CA 95825

Prepared by staff of
The Energy Planning and Instream Flow Branch



PREFACE

The following is the third annual progress report prepared as part of the Clear Creek Restoration Project Monitoring Investigations, a four year effort which began in April 1999. Title 34, Section 3406(b)(12) of the Central Valley Project Improvement Act, P.L. 102-575, authorizes funding for channel restoration of Clear Creek to provide spawning, incubation, and rearing habitat for salmon and steelhead. The purpose of this investigation is to evaluate the success of these restoration activities.

Written comments or questions about this report or these investigations should be submitted to:

Mark Gard, Senior Fish and Wildlife Biologist
Energy Planning and Instream Flow Branch
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2800 Cottage Way
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Introduction

The decline of spring and fall-run chinook salmon and steelhead trout in Clear Creek over the last decade is attributed to many factors, including habitat degradation. The existing habitat appears inadequate for either spawning or rearing. The Central Valley Project Improvement Act (CVPIA), section 3406(b)(12), authorizes funding for channel restoration of Clear Creek to provide spawning, incubation, and rearing habitat for salmon and steelhead. In response to this authorization, in 1998 the USWFS developed the Lower Clear Creek Flood Plain Restoration Project to increase spawning success on the section of Clear Creek below Saeltzer Dam. Part of this study proposal included the use of the Service's Instream Flow Incremental Methodology to compare total weighted usable area of salmonid habitat before and after channel restoration utilizing 2-D modeling. The Clear Creek Study is a four year effort to be completed in two phases (pre-restoration and post-restoration) by 2003, depending on the schedule of restoration construction. All field work for the pre-restoration evaluation was completed in FY99.

The restoration project is approximately two miles long and is located at River Mile 2-4, approximately two miles upstream of the confluence of Clear Creek and the Sacramento River.

Hydraulic Model Construction and Calibration

PHABSIM data decks have been created and hydraulic calibration has been completed for the upstream and downstream boundary transects. Input files for the 2-D modeling program have been prepared and hydraulic calibration has been completed for all four study sites. Simulation of the hydraulics of the sites at the simulation flows is currently underway, with this modeling for one site fully completed. Adult chinook salmon spawning and juvenile rearing habitat will be generated for the simulation flows for each site subsequent to completing the hydraulic simulation modeling. After post-restoration data collection in the fall of 2002, 2-D modeling files will be developed again and a final report evaluating the success of restoration activities in providing more spawning and rearing habitat for salmon will be completed by May 2003.

Habitat Suitability Criteria (HSC) Development

HSC data will not be collected during this study. HSC previously developed on other streams, will be used to predict the amount of spawning and rearing habitat present over a range of discharges in the restoration site prior to and after restoration actions.